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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NOTE, JANIS L

ART UNIT PAPER NUMBER

1756

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding..

Office Action Summary

Application No.

10/724,150

Applicant(s)

TOMITA ET AL.

Examiner

Janis L. Dote

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-13 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13 and 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/4/05; 6/22/05</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The examiner acknowledges the cancellation of claims 9, 14, and 15, and the amendments to claims 1, 10-13, 17, and 19 set forth in the amendment filed on May 31, 2005. Claims 1-8, 10-13, and 16-19 are pending.

2. The examiner has considered the copending applications listed on the "List of related cases" filed in the Information Disclosure Statements filed on Mar. 4, 2005, and Jun. 22, 2005.

3. The objections to the specification set forth in the office action mailed on Mar. 8, 2005, paragraphs 2 and 3, have been withdrawn in response to the amended paragraphs beginning at page 10, line 16, page 39, line 13, page 56, line 24, and page 62, line 6, of the specification, set forth in the amendment filed on May 31, 2005.

The objections to claims 10, 13, and 15 set forth in the office action mailed on Mar. 8, 2005, paragraphs 4 and 5, have been withdrawn in response to the amendment to claim 10 and the cancellation of claims 13 and 15 set forth in the amendment filed on May 31, 2005.

The rejection of claims 17 and 19 under 35 U.S.C. 102(b) over US 5,430,526 (Ohkubo) set forth set forth in the office action mailed on Mar. 8, 2005, paragraph 9, has been withdrawn

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in response to the amendments to claims 17 and 19 filed on May 31, 2005, adding the limitations of a "developing device having therein the toner according to claim 1" and a "developing device having therein the developer according to Claim 13," respectively. Ohkubo does not teach or suggest a process cartridge or an image forming apparatus that comprises a developing device "having therein" the particular toner or developer recited in instant claims 1 and 13, respectively.

The rejection of claim 12 under 35 U.S.C. 102(b) over US 6,326,115 B1 (Nakanishi) set forth set forth set forth in the office action mailed on Mar. 8, 2005, paragraph 10, has been withdrawn in response to the amendments to claim 12 filed on May 31, 2005; adding the limitation that the method steps recited in instant claim 12 makes spindle shaped toner particles as recited in instant claim 1. Nakanishi does not teach or suggest a method of making such spindle shaped toner particles as recited in instant claim 1.

The rejections of claims 1-5, 8, 11-16, 18, and 19 under 35 U.S.C. 102(a) over US 2003/0104297 A1 (Matsuda), as evidenced by US 6,835,520 B2 (Bando) and under 35 U.S.C. 102(e) over Matsuda, as evidenced by Bando, set forth in the office action mailed on Mar. 8, 2005, paragraph 12, have been withdrawn in response to the amendments to claims 1, 11, and 12 adding the limitation of

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now-cancelled claim 9 that the toner has a spindle shape.

Matsuda does not teach or suggest a toner having a spindle shape as recited in the instant claims. Nor is there enough information in the reference for a person having ordinary skill in the art to reasonably presume that the Matsuda toner particles have a spindle shape as recited in the instant claims.

The rejections of claims 1-8, 11-16, 18, and 19 under 35 U.S.C. 102(a) over US 2003/0138717 A1 (Yagi), as evidenced by Bando, and under 35 U.S.C. 102(e) over Yagi, as evidenced by Bando, set forth in the office action mailed on Mar. 8, 2005, paragraph 13, have been withdrawn in response to the amendments to claims 1, 11, and 12 as described supra. Yagi does not teach or suggest a toner having a spindle shape as recited in the instant claims. Nor is there enough information in the reference for a person having ordinary skill in the art to reasonably presume that the Yagi toner particles have a spindle shape as recited in the instant claims.

The rejections under 35 U.S.C. 103(a) of claims 1-7, 11, and 13-15 over Nakanishi combined with US 6,080,519 (Ishiyama) and US 5,547,802 (Kawase), and of claims 16-19 over Ohkubo combined with (1) Nakanishi, as evidenced by Bando, (2) Kawase, and (3) Ishiyama, set forth in the office action mailed on Mar. 8, 2005, paragraphs 15 and 16, respectively, have been

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withdrawn in response to the amendments to claims 1 and 11 as described supra. None of the cited prior art teaches or suggests a toner having a spindle shape as recited in the instant claims.

The rejections under the judicially created doctrine of obviousness-type double patenting of claims 1-5, 11-16, and 18 over claims 1-23 of U.S. Patent No. 6,849,369 B2 (Yagi'369) in view of Japanese Patent 06-175403 (JP'403), of claims 1-8, 11, 13, and 15 over claims 1-8 of U.S. Patent No. 6,740,460 B2 (Tomita'460) in view of JP'403, and of claims 1-4, 11, 13-16, and 19 over claims 1-14 of U.S. Patent No. 6,824,945 B2 (Emoto'945) in view of JP'403, set forth in the office action mailed on Mar. 8, 2005, paragraphs 18, 19, and 21, respectively, have been withdrawn in response to the amendments to claims 1 and 11 filed on May 31, 2005, described supra. None of the claims in Yagi'369, in Tomita'460, or in Emoto'945 recites that the toner has a spindle shape as recited in the instant claims.

The terminal disclaimer filed on May 31, 2005, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent No. 6,852,462 B2 has been reviewed and is accepted. The terminal disclaimer has been recorded. Accordingly, the rejection of claims 1-4, 9, 11, 13-16, and 18 under the

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judicially created doctrine of obviousness-type double patenting over claims 1-16 of U.S. Patent No. 6,852,462 B2 (Emoto'462) in view of JP'403, set forth in the office action mailed on Mar. 8, 2005, paragraph 20, has been withdrawn.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 is indefinite in the phrase "at least a modified polyester (i) capable of reacting with an active hydrogen" (emphasis added) for lack of unambiguous antecedent basis. It is not clear whether "a modified polyester (i) capable of reacting with an active hydrogen" recited in instant claim 12 refers to the "modified polyester resin" recited in instant claim 11, from which claim 12 depends, or to another resin.

Claim 12 is further indefinite in the phrase "dissolving or dispersing a composition, which comprises . . . a colorant" (emphasis added) for lack of unambiguous antecedent basis. It

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is not clear whether "a colorant" recited in instant claim 12 refers to the colorant comprising carbon black recited in instant claim 11, from which claim 12 depends, or to another colorant.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 12 and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by US 2004/0142265 A1 (Tomita), as evidenced by US 6,935,520 B2 (Bando).

Tomita discloses a toner comprising a binder resin comprising a urea-modified polyester resin and an unmodified polyester resin - low molecular weight polyester 2, an ester wax as the releasing agent, and carbon black associated with the tradename REGAL 400R manufactured by Cabot Co. See paragraphs 0210-0215, 0217-0224, 0243-0245; and example 7 in paragraph 0246. The toner has a number average particle size (Dn) of 3.4 μm and a volume average particle size (Dv) of 4.0 μm , and a ratio of Dv/Dn of 1.18. The toner has a spindle shape which meets the shape limitations recited in instant claims 12 and 17-19. See paragraph 0246 and Table 1 at page 22, example 7. The values of Dv and the ratio Dv/Dn are within the

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ranges recited in instant claims 12 and 17-19. The weight ratio of the urea-modified polyester to low polyester resin 2 is about 0.4. The weight ratio was determined by the information provided in example 7 of Tomita. Tomita does not disclose that the carbon black associated with the tradename REGAL 400R has a pH as recited in instant claims 12 and 17-19. However, it is well known in the carbon black art that carbon black associated with the trademark REGAL 400R manufactured by Cabot Co. has a pH of 4.0, which is within the pH range of "not greater than 7" recited in the instant claims. See Bando, col. 36, line 62-63. Accordingly, carbon black associated with the tradename REGAL 400R meets the carbon black limitations recited in the instant claims.

The Tomita toner 7 is obtained by: (1) preparing a master batch comprising the carbon black and a polyester resin; (2) preparing a material solution comprising the ester wax and the low molecular weight polyester; (3) forming a pigment-wax dispersion by mixing the master batch of step (1), the material solution, and additional low molecular weight polyester; (4) mixing the pigment-wax dispersion of step (3), a prepolymer comprising isocyanate groups, which is capable of reacting with an active hydrogen to form the urea-modified polyester, and a ketimine compound, which has an active hydrogen, in an organic

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solvent; (5) dispersing the mixture of step (4) in an aqueous medium comprising resin particles, while reacting the ketimine compound with the prepolymer to form toner particles; (6) removing the organic solvent from the dispersion of step (5); (7) washing the toner particles of step (6); and (8) drying the toner particles. Paragraphs 0213, 0217-0224, 0240, and 0244-0246. The Tomita process steps meets the product-by process limitations recited in instant claims 17-19 and the process steps recited in instant claim 12.

Tomita further discloses an image forming apparatus that meets the apparatus comprising a process cartridge as recited instant claim 17. The apparatus meets the apparatus components recited in instant claim 19. The Tomita apparatus comprises a process cartridge 10, which comprise a photoreceptor 11, a charger 12, and a developing unit 13. See Fig. 7 and paragraphs 0203-0204. Tomita further discloses that the developing unit comprises a toner container. Paragraph 0205, lines 1-3. Tomita also discloses an imaging process that meets the steps recited in instant claim 18. Paragraph 0032.

Applicant's arguments filed on May 31, 2005, have been fully considered but they are not persuasive.

Applicants assert that Tomita is not prior art, because they have perfected their claim foreign priority under 35 U.S.C.

119 to Japanese patent application No. 2002-347478 by filing a verified English-language translation of said document on May 31, 2005.

However, the translation does not provide an adequate written description of the subject matter recited in the instant claims 12 and 17-19 as required under 35 U.S.C. 112, first paragraph for the following reasons:

(1) The steps recited in instant claim 12 lack antecedent basis in the translation. The translation at page 9, lines 3-8, discloses a method comprising the steps of "dissolving or dispersing a toner composition in an organic solvent to form a toner composition liquid and dispersing the toner composition liquid in an aqueous liquid. The aqueous liquid contains a binder resin including a modified polyester (i) and a carbon black which has a pH not greater than 7." The translation does not disclose the steps (A) to (E) recited in instant claim 12. Applicants have not indicated where in the translation there is antecedent basis for the steps recited in instant claim 12.

(2) The steps recited in instant claim 18 lack antecedent basis in the translation. The translation at page 10, lines 14-15, merely discloses "an image forming method, which is characterized by including the step of using the developer set froth [sic] in (11)." Applicants have not indicated where in the

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translation there is antecedent basis for the steps recited in instant claim 18.

(3) The structural components in the process cartridge and in the image forming apparatus recited in instant claims 17 and 18, respectively, lack antecedent basis in the translation. The translation at page 10, lines 16-17, merely discloses "an image forming apparatus, which is characterized in that the toner set forth in (11) is installed therein." Applicants have not indicated where in the translation there is antecedent basis for the apparatus structural components recited in instant claims 17 and 19.

Accordingly, applicants have not perfected their claim to foreign priority. Tomita remains as prior art with respect to instant claims 12 and 17-19.

8. Claims 1-5, 11-13, 16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,852,462 B2 (Emoto'462) combined with Japanese Patent 06-175403 (JP'403). See the USPTO English-language translation of JP'403 for cites.

Emoto'462 discloses a toner comprising a binder resin comprising a modified polyester resin and an unmodified polyester resin - dead polymer (1), a rice wax as the releasing agent, and a colorant. See example 3 at cols. 20 and 21. The

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toner has a volume average particle size (D_v) of 4.9 μm , and a ratio of D_v/D_n (D_n is the number average particle size) of 1.14. The toner has a spindle shape which meets the shape limitations recited in instant claims 1 and 11. Col. 21, lines 41-42, and Table 2 at col. 25, example 3. The values of D_v and the ratio D_v/D_n are within the ranges recited in instant claims 1 and 11. The weight ratio of the urea-modified polyester to polyester resin is about 0.24, which is within the weight ratio range recited in instant claim 5. The weight ratio was determined by the information provided in example 3 of Emoto'462. Emoto'462 also discloses that the toner can be used in a two-component developer comprising a carrier. Col. 18, lines 9-12.

The Emoto'462 toner 3 is obtained by: (1) dispersing or dissolving a prepolymer comprising hydroxyl groups, the polyester resin, the colorant, and wax in an organic solvent to form an oil phase; (2) adding diphenylmethanediisocyanate, i.e., an active hydrogen compound, to the oil phase of step (1); (3) dispersing the mixture of step (2) in an aqueous medium, while reacting the diphenylmethanediisocyanate with the prepolymer to form spindle shaped toner particles; (4) removing the organic solvent from the dispersion of step (3); (5) washing the toner particles of step (4); and (6) drying the toner particles. Col. 21, lines 16-42. The Emoto'462 process steps

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meets the product-by process limitations recited in instant claims 1 and 2 and the process steps recited in instant claim 12, but for the presence of the particular carbon black recited in the instant claims.

Emoto'462 further discloses an image forming apparatus that meets the structural components recited in instant claim 19. See Fig. 1 and col. 18, lines 52-59. The image developer 4 in the Emoto'462 apparatus of Fig. 1 meets the structural limitation of a toner container recited in instant claim 16. Emoto'462 also discloses an imaging process that meets the steps recited in instant claim 18, but for the presence of the particular carbon black recited in instant claim 18. See reference claim 14.

Emoto'462 does not exemplify a toner comprising the colorant carbon black having a pH of not greater than 7 as recited in instant claims 1 and 11.

However, a carbon black having a pH of not greater than 7 is well known in the toner prior art. JP'403 teaches a carbon black having an ultraviolet absorption of 0.03, a BET specific surface area of 126 m²/g, a DBP oil absorption of 100 ml/100g, and a pH of 3. See the JPO translation, paragraph 0020. According to JP'403, when a toner comprises such a carbon black as the toner colorant, the toner has improved toner charge rise

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characteristics, and continuously provides images with stable image density with "no image smudging, e.g., blurring." The JP'403 carbon black prevents toner scattering in the printer or copying machine. Translation, paragraph 0037. JP'403 further teaches that the use of "acidic" carbon black is desirable to improve the toner charge characteristics. The "acidic" carbon black has improved compatibility with the toner resin.

Translation, paragraph 0013.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'403, to use the JP'403 carbon black as the colorant in the toner of example 3 of Emoto'462. That person would have had a reasonable expectation of successfully obtaining a toner, a developer, a toner container, an image forming process, and an image forming apparatus that continuously provide toner images with stable image density with no image smudging or toner scattering.

Instant claims 3 and 4 are written in product-by-process format. Emoto'462 does not exemplify a toner obtained by the process steps recited in instant claims 3 and 4. However, as discussed supra, the toner rendered obvious over the combine teachings of Emoto'462 and JP'403 meets the toner limitations recited in instant claims 3 and 4. Thus, it appears that such a toner is the same or substantially the same as the toner made by

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the process limitations recited in the instant claims. The burden is on applicants to prove otherwise. In re Marosi, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985). MPEP 2113.

9. Claims 1-5, 10, 11, 13, 16, 18, and 19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/712,026 (Application'026) in view of JP'403. See the USPTO translation of JP'403 for cites.

Reference claim 11, which depends from reference claim 8, which in turn depends on reference claim 1, recites a toner comprising a binder resin comprising a modified polyester resin and an unmodified polyester resin in a weight ratio of 5/95 to 80/20, and a colorant. The binder resin meets the binder resin limitation recited in instant claims 1 and 5. Reference claim 14, which depends from reference claim 1, requires that the toner have a volume average particle size of 3.0 to 8.0 μm , which overlaps the range of 3 to 7 μm recited in instant claims 1 and 11, and a ratio of the volume average particle size (Dv) to the number average particle size (Dn) of 1.00 to 1.20. The ratio Dv/Dn of 1.00 to 1.20 is within the range of 1.00 to 1.25 recited in instant claims 1 and 11. Reference claim 17,

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which depends from reference claim 16, which in turn depends from reference claim 1, recites that the toner has the shape of a spindle as recited in instant claims 1 and 11 and claim 10. Reference claims 9 and 10, which both depend from reference claim 8, which depends from reference claim 1, require that the modified polyester resin be made by process steps that meet the product-by-process limitations recited in instant claims 1 and 2. Reference claim 19 recites an imaging process comprising the steps of developing an electrostatic latent image on an image carrier with a toner, which is the same as the toner recited in reference claim 1, and transferring the toned image to a receiving member. Reference claim 21 recites a developing device that holds a toner, which is the same as the toner recited in reference claim 1. Reference claim 24 recites an image forming apparatus that comprises a photoconductor and a developing unit.

Application'026 does not recite that the colorant in the toner recited in reference claim 1 is a carbon black having a pH of not greater than 7 recited in instant claims 1 and 11.

However, a carbon black having a pH of not greater than 7 is well known in the toner prior art. JP'403 teaches a carbon having a pH of 3. The discussion of JP'403 in paragraph 8 above is incorporated herein by reference.

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It would have been obvious for a person having ordinary skill in the art, in view of the subject matter recited in Application'026 and the teachings of JP'403, to use the JP'403 carbon black as the colorant in toner recited in Application'026, and to adjust, through routine experimentation, the Dv and Dn of the toner, such that the resultant toner has a Dv and a ratio Dv/Dn as recited in the instant claims, because that person would have had a reasonable expectation of successfully obtaining a toner, a toner container, an image forming process, and an image forming apparatus that continuously provide toner images and an image forming apparatus that continuously provide toner images with stable image density with no image smudging or toner scattering.

Instant claims 3 and 4 are written in product-by-process format. The claims in Yagi'369 do not recite that the toner is obtained by the process steps recited in instant claims 3 and 4. However, as discussed supra, the toner rendered obvious over the subject matter recited in Application'026 combined with the teachings of JP'403 meets the toner limitations recited in instant claims 3 and 4. Thus, it appears that such a toner is the same or substantially the same as the toner made by the process limitations recited in the instant claims. The burden

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is on applicants to prove otherwise. Marosi, supra; Thorpe, supra; MPEP 2113.

Applicants' arguments filed on May 31, 2005, have been fully considered but they are not persuasive.

Applicants state that since the only remaining rejection in the instant application is the above provisional rejection, "the Examiner is requested to follow the procedure set forth in the MPEP and permit the present application to proceed to allowance/issue, and make any such rejection in the copending case as appropriate."

However, the provisional obviousness-type double patenting rejection is not the only rejection remaining in the instant application. Furthermore, the examiner notes that a terminal disclaimer must be required, when the obviousness-type double patenting (ODP) rejection is over an earlier filed application before the ODP rejection can be withdrawn. See MPEP 1490, page 1400-95 (8th edition, Rev. 2, May 2004). Accordingly, because US application 10/712,026 was filed before the instant application, the provisional obviousness-type double patenting rejection over US application 10/712,026 stands.

10. Claims 1-5, 10, 11, and 16-18 are provisionally rejected under the judicially created doctrine of obviousness-type double

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patenting as being unpatentable over claims 1-17, 24, and 25 of copending Application No. 10/645,804 (Application'804) in view of Diamond, Handbook of Imaging Materials, pp. 168-169 (Diamond) and JP'403. See the USPTO translation of JP'403 for cites.

Reference claim 16, which depends from reference claim 1, recites a toner comprising toner particles comprising a binder resin, wherein the toner particles have a spindle form. The spindle form meets the toner form limitation recited in instant claims 1 and 11. Reference claim 17, which depends on reference claim 16, recites that the toner particles have an average major axis particle diameter r_1 , an average minor axis particle diameter r_2 , and an average thickness r_3 , which satisfy the ratios recited in instant claim 10. Reference claim 14, which depends on reference claim 1, requires that the toner have a volume average particle size of 3.0 to 8.0 μm , which overlaps the range of 3 to 7 μm recited in instant claims 1 and 11, and a ratio of the volume average particle size (D_v) to the number average particle size (D_n) of 1.00 to 1.20. The ratio D_v/D_n of 1.00 to 1.20 is within the range of 1.00 to 1.25 recited in instant claims 1 and 11. Reference claim 11, which depends from reference claim 8, which depends in turn from reference claim 1, requires that the binder resin comprise a modified polyester and an un-modified polyester in a weight ratio of 5:95 to 80:20,

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which meets the binder compositional limitations recited in instant claims 1, 5, and 11. Reference claim 9, which depends on reference claim 8, requires that the toner be made by steps that meet the steps recited in instant claim 1 but for the presence of particular carbon black recited in instant claim 1. Reference claim 10, which depends from reference claim 9, which depends from reference claim 8, requires that the modified polyester resin be a polyester having "a urea bonding" which is obtained from a pre-polymer by the steps recited in instant claim 2 but for the presence of the particular carbon black recited in instant claim 2.

Reference claim 24 covers a process cartridge that meets the structural limitations recited in instant claim 17. The image developer, i.e., developing device, recited in reference claim 24 comprises a toner, which is the same toner recited in reference claim 1. The image developer also meets the structural limitation "a toner container" recited in instant claim 16. Reference claim 25 recites an image forming method comprising the steps of developing a latent electrostatic image on a photoconductor, i.e., image carrier, with a toner, which is the same toner recited in reference claim 1, and transferring the toner image to a recording medium.

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It would have been obvious for a person having ordinary skill in the art, in view of the subject matter claimed in Application'804, to make and use a toner comprising the modified binder resin recited in reference claims 8-11, and to adjust, through routine experimentation, the Dv and Dn of the toner, such that the resultant toner has a Dv and a ratio Dv/Dn as recited in the instant claims. That person would have had a reasonable expectation of successfully obtaining a toner, a toner container, a process cartridge, and an image forming method that are capable of providing toned images in an electrophotographic process.

The claims of Application'804 do not recite that the toner comprises the colorant carbon black as recited in instant claims 1 and 11. However, the use of color coloring agents has long been well known in the art. Diamond discloses that the most common colorant for toners is carbon black. Page 168, line 16. A carbon black having a pH of not greater than 7 is well known in the toner prior art. JP'403 teaches a carbon black having a pH of 3. The discussion of JP'403 in paragraph 8 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter recited in Application'804 and the teachings in Diamond and JP'403, to use

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the JP'403 carbon black as the colorant in the toner rendered obvious over the subject matter recited in Application'804 because that person would have had a reasonable expectation of successfully obtaining a toner, a toner container, a process cartridge, and an image forming process, that continuously provide toner images with stable image density and with no image smudging or toner scattering.

Instant claims 3 and 4 are written in product-by-process format. The claims in Application'804 do not recite that the toner is obtained by the process steps recited in instant claims 3 and 4. However, as discussed supra, the toner rendered obvious over the subject matter recited in Application'804 combined with the teachings of Diamond and JP'403 meets the toner limitations recited in instant claims 3 and 4. Thus, it appears that such a toner is the same or substantially the same as the toner made by the process limitations recited in the instant claims. The burden is on applicants to prove otherwise. Marosi, supra; Thorpe, supra; MPEP 2113.

11. Claims 1-7, 10-13, and 16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-27 of copending

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Application No. 10/670,320 (Application'320) in view of JP'403.

See the USPTO translation of JP'403 for cites.

Reference claim 13, which depends from reference claim 1, recites a toner comprising a modified polyester resin, a second resin, and a colorant, wherein the toner has a spindle form. The spindle form meets the toner form limitation recited in instant claims 1 and 11. The toner is obtained by process steps that meet the steps recited in instant claims 1, 2, and 12, but for the presence of the particular carbon black recited in instant claims 1, 2, and 12. Reference claim 14, which depends on reference claim 13, recites that the toner particles have a average major axis particle diameter r_1 , an average minor axis particle diameter r_2 , and an average thickness r_3 , which satisfy the ratios recited in instant claim 10. Reference claim 17, which depends from reference claim 1, requires that the toner have a volume average particle size ranging from 3 to 7 μm , which meets the particle size range recited in instant claims 1 and 11. Reference claim 18, which depends on reference claim 17, requires that the toner have a ratio of the volume average particle size (D_v) to the number average particle size of not greater than 1.25, which meets the ratio range recited in instant claims 1 and 11. Reference claim 8, which depends from reference claim 1, further requires that the second resin be an

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unmodified polyester resin present in a weight ratio that meets the weight ratio range recited in instant claim 5. Reference claim 9, which depends on reference claim 8, requires that the unmodified polyester resin have an acid value of 0.5 to 40 mg KOH/g, which overlaps the range of 1 to 15 mg KOH/g recited in instant claim 6. Reference claim 19, which depends from reference claim 1, requires that the unmodified polyester resin have a peak molecular weight as recited in instant claim 7. Reference claim 27, which depends from reference claim 1, recites a developer comprising a carrier and the toner according to reference claim 1. Reference claim 25, which depends on reference claim 1, recites a toner container containing the toner of claim 1.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter claimed in Application'320, to make and use a toner comprising the unmodified polyester resin in reference claims 8, 9, and 19, such that the unmodified polyester resin meets the limitations recited in instant claims 5, 6 and 7, and to adjust, through routine experimentation, the D_v and D_n of the toner, such that the resultant toner has a D_v and a ratio D_v/D_n as recited in the instant claims. That person would have had a reasonable expectation of successfully obtaining a toner, a developer, a

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method of making said toner, and a toner container that are capable of providing toned images in an electrophotographic process.

The claims of Application'320 do not recite that the colorant in the toner is a carbon black having a pH of not greater than 7 as recited in instant claims 1 and 11. However, a carbon black having a pH of not greater than 7 is well known in the toner prior art. JP'403 teaches a carbon black having a pH of 3. The discussion of JP'403 in paragraph 8 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter recited in Application'320 and the teachings in JP'403, to use the JP'403 carbon black as the colorant in toner rendered obvious over the subject matter recited in Application'320. That person would have had a reasonable expectation of successfully of obtaining a toner, a developer, a method of making said toner, and a toner container containing said toner that continuously provide toner images with stable image density with no image smudging or toner scattering.

Instant claims 3 and 4 are written in product-by-process format. The claims in Application'320 do not recite that the toner is obtained by the process steps recited in instant

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claims 3 and 4. However, as discussed supra, the toner rendered obvious over the subject matter recited in Application'320 combined with the teachings of JP'403 meets the toner limitations recited in instant claims 3 and 4. Thus, it appears that such a toner is the same or substantially the same as the toner made by the process limitations recited in the instant claims. The burden is on applicants to prove otherwise.

Marosi, supra; Thorpe, supra; MPEP 2113.

12. Claims 1-5, 8, 10, 11, 13, and 16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 10/724,260 (Application'260) combined with JP'403. See the USPTO translation of JP'403 for cites.

Reference claim 13, which depends from reference claim 1, recites a toner comprising a first binder resin, a second binder resin, and a colorant, wherein the toner has a spindle form. The first resin binder and the second resin binder are present in a weight ratio of the second resin binder to the first resin binder of 5/95 to 40/60. The first resin binder has a Tg of 40 to 55°C. The spindle form meets the toner form recited in instant claims 1 and 11. The weight ratio meets the weight ratio recited in instant claim 5. Reference claim 4, which

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depends on reference claim 1 requires that the first resin binder be a polyester resin. The polyester resin recited in reference claim 4 meets the polyester resin recited in instant claims 5 and 8. Reference claim 5, which depends from reference claim 1, requires that the second resin binder be a modified polyester resin, which meets the binder resin limitation recited in instant claims 1 and 11. Reference claim 14, which depends on reference claim 13, recites that the toner particles have a average major axis particle diameter r_1 , an average minor axis particle diameter r_2 , and an average thickness r_3 , which satisfy the ratios recited in instant claim 10. Reference claim 6, which depends on reference claim 1, requires that the toner have a volume average particle size of 4 to 7 μm , which is within the particle size range of 3 to 7 μm recited in instant claims 1 and 11. Reference claim 7, which depends on reference claim 6, requires that the toner have a ratio of the volume average particle size (D_v) to the number average particle size of 1.00 to 1.20, which meets the ratio range recited in instant claims 1 and 11.

Reference claim 15 recites a developer comprising a carrier and the toner according to reference claim 1. Reference claim 16 recites a container containing the toner according to reference claim 1. Reference claim 18 recites a method of

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making the toner of reference claim 1 comprising the steps recited in instant claims 1 and 2, but for the presence of the carbon black recited in instant claims 1 and 2.

The claims of Application'320 do not recite that the colorant in the toner is a carbon black having a pH of not greater than 7 as recited in instant claims 1 and 11. However, a carbon black having a pH of not greater than 7 is well known in the toner prior art. JP'403 teaches a carbon black having a pH of 3. The discussion of JP'403 in paragraph 8 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter recited in Application'260 and the teachings in JP'403, to use the JP'403 carbon black as the colorant in toner recited in Application'260, the modified polyester resin and polyester resin recited in reference claims 5 and 18 and claim 4, respectively, as the second and first binder resins, and to adjust, through experimentation, the Dv and Dn of the toner, such that the resultant toner has a Dv and Dv/Dn as recited in the instant claims. That person would have had a reasonable expectation of successfully obtaining a toner, a developer, and a toner container containing said toner that continuously provide toner images with stable image density with no image

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smudging or toner scattering.

Instant claims 3 and 4 are written in product-by-process format. The claims in Application'260 do not recite that the toner is obtained by the process steps recited in instant claims 3 and 4. However, as discussed supra, the toner rendered obvious over the subject matter recited in Application'260 combined with the teachings of JP'403 meets the toner limitations recited in instant claims 3 and 4. Thus, it appears that such a toner is the same or substantially the same as the toner made by the process limitations recited in the instant claims. The burden is on applicants to prove otherwise.

Marosi, supra; Thorpe, supra; MPEP 2113.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (571) 203-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on

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access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD

Jul. 25, 2005

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